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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,721	02/28/2002	Helmut Boehm	218936USOPCT	3974
22830	7390	01/22/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			PIZZAUTO, HELEN LEE	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 01/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/069,721

Applicant(s)

BREHM ET AL.

Examiner

Helen L. Pezzuto

Art Unit

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 9-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-7 and 9-18 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2/28/02  
4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Applicant's election with traverse of Group I in Paper filed on 10/16/03 is acknowledged. The traversal is on the ground(s) that previous examiner did not offer explanation of why the water-soluble polymer composition claimed is considered to lack novelty or an inventive step in view of US-839 to Patel et al. This is not found persuasive because although Patel et al may emphasize mixing procedure, the reference does, teach a continuous process of producing the instant water-soluble polymer with control means for monomer feeds, including sequential feeding in a continuous manner, thus encompass the instant scope of recurrent pattern.

The requirement is still deemed proper and is therefore made FINAL.

2. Claim 18 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper filed on 10/16/03.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-7, and 9-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 2, the recited "wherein said polymerization at least one parameter biasing.." is unclear and confusing. Please make the necessary correction.

What is the scope and meaning of "recurrent pattern" which is further defined as "an oscillation about a mean value which can be selected at random" and the "oscillation is harmonic or anharmonic or undamped". The examiner failed to find concise definition to these terms in applicant's specification so as to clearly define applicant's invention (i.e. are the parameters controlled by physical means, computer software, combinations thereof?). In particular, regarding the product by process claims 1-7, where the composition is characterized in terms of its method of preparation, the claims must recite all pertinent features of the process in clear language so as to render the composition reasonable definite.

Art Unit: 1713

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1-7, and 9-17 are rejected under 35 U.S.C. 102(b), 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 0 630 909 A1 or Patel et al. (US-839).

EP-909 discloses a continuous dispersion polymerization process of forming water-soluble polymer.

Prior art process embodiments include monomer feed in increments (i.e. drop wise) over extended time period, subsequent to initial monomer feed, which clearly reads on the instant step of at least one parameter varied according to a recurrent pattern. Other reaction components such as initiator, and chain transfer agents, may also be added incrementally. Suitable water-soluble monomers include those of instantly preferred (page 12, lines 5-55; see claims). Suitable reactor design was expressly taught in the reference, wherein experimental parameters (i.e. post-initiation monomer feed at consistently rates over time) is controlled and carried out (page 13, lines 30-51).

U.S. 6,103,839 to Patel et al. discloses a continuous free radical polymerization process for producing water-soluble polymers. Prior art process provides good mixing, transport and control over molecular weight distribution and temperature, include continuously feeding monomers, initiators, chain transfer agents, etc. after the onset of initiation (col. 5, line 41 to col. 6, line 6; col. 6, lines 43-48; col. 7, line 19 to col. 8, line 3) with suitable experimental design. Suitable monomers, comonomers and initiators include those of presently claimed. Prior art process clearly encompass the instant step of at least

Art Unit: 1713

one parameter varied according to a recurrent pattern as expressed in the claims.

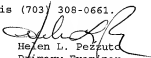
The examiner is of the position that prior art processes discussed above anticipate the broad interpretation of the instant product by process and process claims, in light of applicant's disclosure. Specifically, with respect to claims 1-7, absent a comparative showing of critical patentability is not impacted by product by process limitations relating to the means of obtaining the product. Accordingly, prior art products containing the same constituents as applicant, are commensurate with the instant product because no criticality for the process has been shown in a side-by-side manner. Regarding the process claims, even if they were not held under 102, it would have been obvious to one skilled in art to carry out a continuous polymerization process by varying at least one parameter according to a recurrent pattern, in light of the reactor configuration (i.e. arrangement of mixers and feeding valves, etc) taught in the references, absent a showing of the contrary.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Helen L. Pezzuto  
Primary Examiner  
Art Unit 1713

hlp